

ABSTRACT

5 On closing the door, that is conventionally hinged to the vehicle body, keys of interengagable assemblies smoothly engage with mating receptacles located on both pillars, the vehicle roof and side rail. The smooth interengagement is ensured by the adjusting mechanisms of the keys, located on the front, rear, upper and lower reinforced portion of the door, to reduce large clearances between them and their receptacles to minimum tolerances. In an accident the door tightly mates with the door-aperture of vehicle body whereby energy is distributed to the integrated vehicle body.

10 In the second feature of invention, the interengagable assemblies of a vehicular couple, consisting of the portion of the door and a member of the vehicle body, are arranged in at least two operating planes.

15 In the third feature, the deformation of the series-connected doors and their common pillar is constrained in an accident owing to an extension member, rigidly attached to the common pillar, accommodating the keys, which tightly mate with the receptacles located on the rear portion of the front door and the front portion of the rear door.

In the fourth and fifth feature, the interengagable assemblies of the vehicular couple are arranged in multi-operating planes thus cutting costs associated with less adjusting work to reduce large clearances to small tolerances.

20 This inventive technology is applicable for other door-types such as tailgate-, sliding side-, cargo-, liftgate door, trunk cover and hood to define a substantially stiffer vehicle body whereby stress is enormously decreased in an accident.